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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/549,986

09/19/2005

Norio Sakai

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05/05/2008

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SUITE 850

MCLEAN, VA 22102

EXAMINER

VU, HUNG K

ART UNIT

PAPER NUMBER

2811

NOTIFICATION DATE

DELIVERY MODE

05/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/549,986 | Applicant(s) SAKAI ET AL. | |
| | Examiner HUNG VU | Art Unit 2811 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-17 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Amended claims 10-16, which are not belong to the elected embodiment 4 of Figures 4 and 6, and claims 17 and 30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08/09/07.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al. (PN 5,331,204, of record).

Regarding claim 23, Kuroda et al. discloses, as shown in Figures 1-3, a ceramic multilayer substrate comprising:

a ceramic laminate (2) including a plurality of ceramic layers, having a first main surface (upper surface of layer 2), and including internal circuit elements (4 and vias) disposed inside of the laminate;

a resin layer (3) having a bonding surface (lower surface of 3) in contact with the first main surface of the ceramic laminate and a mounting surface (upper surface of 10) opposite to the bonding surface;

external electrodes (10), each disposed on the mounting surface of the resin layer and electrically connected to at least one of the internal circuit elements of the ceramic laminate; a ground electrode (upper layer 9) disposed inside of the resin layer.

Regarding claim 24, Kuroda et al. discloses the ground electrode includes a metal that is integral with the ceramic laminate [Figure 1].

Note that the terms “laminate”, “sintered” and “baked” are method recitations in a device claimed.

Regarding claim 25, Kuroda et al. discloses the substrate further comprising a first circuit component (8) mounted on the first main surface and covered with the resin layer, wherein the ground electrode (9) is disposed on a side that is closer to the mounting surface than the first circuit component [Figure 1].

Regarding claim 26, Kuroda et al. discloses the first circuit component is disposed within a region defined by projecting the ground electrode on the first main surface [Figure 1].

Regarding claim 27, Kuroda et al. discloses the substrate further comprising relay electrodes (5) disposed so as to extend along the first main surface, wherein electrical connection from the external electrodes to the internal circuit elements are provided through the relay electrodes [Figure 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. (PN 5,331,204, of record) in view of Takehara et al. (US 2003/0071350, of record).

Regarding claim 28, Kuroda et al. discloses the claimed invention including the substrate as explained in the rejection above. Kuroda et al. further discloses a substrate comprises a second main surface on an opposite side to the first main surface (bottom surface of 2). Kuroda et al. does not disclose a second circuit component is mounted on the second main surface. However, Takehara et al. discloses a ceramic laminate (2) comprises a second main surface (upper surface of 2) on an opposite side to a first main surface (lower surface of 2) and a second circuit component (3) is mounted on the second main surface [Figures 1-9]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the substrate of Kuroda et al. further comprising a second circuit component mounting on the second main surface, such as taught by Takehara et al. in order to integrate more circuit components and to increase the circuit density.

Regarding claim 29, Kuroda et al. and Takehara et al. disclose the claimed invention including the substrate as explained in the rejection above. Kuroda et al. and Takehara et al. do not disclose a conductive case is disposed on the second main surface to cover the second circuit

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component. However, as shown in Figure 10, Takehara et al. discloses a conductive case (10) is disposed on a second main surface of a substrate (2) to cover the second circuit components (1,3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the substrate of Kuroda et al. and Takehara et al. having a conductive case being disposed on the second main surface to cover the second circuit component, such as taught by Figure 10 of Takehara et al., in order to protect the circuit component from external contamination.

Response to Arguments

Applicant's arguments with respect to claim 23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vu whose telephone number is (571) 272-1666. The examiner can normally be reached on Monday to Thursday 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne A. Gurley can be reached on (571) 272 - 1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vu

April 16, 2008

/Hung Vu/

Primary Examiner